

REMARKS

The Decision on Appeal decided on May 30, 2007, has been carefully reviewed and the following remarks and amendments have been made in consequence thereof.

Claims 6, 7, 9-12, and 14-16 are pending in this application. Claims 6, 7, 9-12, and 14-16 stand rejected. Claims 13 and 17 has been canceled.

As stated in the Decision to Appeal, both of the 35 U.S.C. Section 112 rejections mentioned in the Office Action mailed August 10, 2005, are reversed. However, the 35 U.S.C. Section 102 is sustained. As such, in response to the Decision on Appeal, Applicants are submitting herewith a Request for Continued Examination to continue prosecution.

The rejection of Claims 6, 7, 9-12, and 14-16 under 35 U.S.C. 102(b) as being anticipated by Hodgens, II, et al. (U.S. Patent No. 4,713,120) is respectfully traversed.

Hodgens, II et al. describe a composition and method for removing deposits (10) from internal components (24) of a gas turbine engine (18). Specifically, Hodgens, II et al. describe a portable wash cart (11) for cleaning a portion of engine (18). Wash cart (11) includes a cleaning composition container (12) including a cleaning composition (15), and a rinse solution container (13) including a rinsing solution (16). Cart (11) further includes a flexible hose (23) that includes a single spray probe (20). The probe (20) is inserted through a boroscope port (21) to inject solutions (15 and 16) into engine (18). Cleaning composition (15) is formed from an aqueous solution, and is injected into a typical airflow path to loosen deposits (10) formed along the flowpath within engine (18). Rinsing solution (16) is injected into engine (18) to facilitate removing both the cleaning composition (15) and loosened deposits. Notably, Hodgens, II et al. do not describe nor suggest a washing system that includes a plurality of spray nozzles coupled to a ring manifold wherein the plurality of spray nozzles are circumferentially spaced about the gas turbine engine, and wherein the plurality of spray nozzles are oriented to discharge at least one of a first fluid and a second fluid radially inward into the gas turbine engine from the ring manifold.

Claim 6 recites an apparatus for a gas turbine engine comprising “a plurality of spray nozzles coupled to a ring manifold, said plurality of spray nozzles are circumferentially spaced about the gas turbine engine and are oriented to discharge at least one of a first fluid and a second fluid radially inward into the gas turbine engine from the ring manifold, the first fluid contained within a first reservoir, the second fluid contained within one of the first reservoir and a second reservoir, said washing system configured to inject the first fluid and the second fluid into the gas turbine engine, wherein one of the first and second fluids comprises an anti-static liquid that facilitates reducing a rate of formation of particulate matter within the gas turbine engine.”

Hodgens, II et al. do not describe nor suggest an apparatus for a gas turbine engine as is recited in Claim 6. Specifically, Hodgens, II et al. do not describe nor suggest an apparatus for a gas turbine engine including a washing system that includes a plurality of spray nozzles coupled to a ring manifold wherein the plurality of spray nozzles are circumferentially spaced about the gas turbine engine, and wherein the plurality of spray nozzles are oriented to discharge at least one of a first fluid and a second fluid radially inward into the gas turbine engine from the ring manifold. Rather, Hodgens, II et al. describe a portable wash cart for cleaning a portion of an engine wherein the wash cart includes a flexible hose that includes only a single spray probe that is inserted through a boroscope port defined in the engine casing.

Accordingly, for at least the reasons set forth above, Claim 6 is submitted to be patentable over Hodgens, II et al.

Claims 7 and 9-11 depend from independent Claim 6. When the recitations of Claims 7 and 9-11 are considered in combination with the recitations of Claim 6, Applicants submit that dependent Claims 7 and 9-11 likewise are patentable over Hodgens, II et al.

Claim 12 recites a gas turbine engine washing system configured to reduce particulate matter within the gas turbine engine, and wherein the gas turbine engine includes a compressor. The washing system comprises “a plurality of spray nozzles coupled to a ring manifold, said plurality of spray nozzles are circumferentially spaced about the gas turbine engine and are oriented to discharge at least one of a first fluid and a second fluid radially

inward into the gas turbine engine from the ring manifold, the first liquid contained within a first reservoir, the second fluid contained within one of the first reservoir and a second reservoir, the plurality of nozzles coupled in flow communication with at least one of said first and second reservoirs and for injecting the first and second fluids into the gas turbine engine upstream from said compressor, wherein one of the first and second fluids is an anti-static liquid that facilitates reducing electrostatic attraction within the gas turbine engine.”

Hodgens, II et al. do not describe nor suggest a gas turbine engine washing system as is recited in Claim 12. Specifically, Hodgens, II et al. do not describe nor suggest a washing system that includes a plurality of spray nozzles coupled to a ring manifold wherein the plurality of spray nozzles are circumferentially spaced about the gas turbine engine, and wherein the plurality of spray nozzles are oriented to discharge at least one of a first fluid and a second fluid radially inward into the gas turbine engine from the ring manifold. Rather, Hodgens, II et al. describe a portable wash cart for cleaning a portion of an engine wherein the wash cart includes a flexible hose that includes only a single spray probe that is inserted through a boroscope port defined in the engine casing.

Accordingly, for at least the reasons set forth above, Claim 12 is submitted to be patentable over Hodgens, II et al.

Claims 14-16 depend from independent Claim 12. When the recitations of Claims 14-16 are considered in combination with the recitations of Claim 12, Applicants submit that dependent Claims 14-16 likewise are patentable over Hodgens, II et al.

Accordingly, and for at least the reasons set forth above, Applicants respectfully request the Section 102 rejection of claims 6, 7, 9-12, and 14-16 be withdrawn.

The rejection of Claims 6, 7, 9-2, and 14-16 under 35 U.S.C. 102(b) as being anticipated by Bartos, et al. (U.S. Patent No. 4,059,123) is respectfully traversed.

Bartos, et al. describe a self-contained turbine engine cleaning and preservation unit (10). Unit (10) includes a water reservoir (18), a preservative reservoir (20), a reservoir (22) and a solvent reservoir (24). Water reservoir (18) contains water, preservative reservoir (20) contains preservation solution for protecting engine components from rust, reservoir (22)

contains cleaner, and reservoir (24) contains solvent. A ring assembly (96) is configured to inject fluids into a gas turbine engine. Ring assembly (96) includes two arcuate tube sections (222 and 224) having threaded fittings on one end which allow attachment to a t-section (226). T-section (226) attaches to a high pressure hose (94) that is coupled in flow communication with unit (10). The second end of tube sections (222 and 224) are stopped by means of end caps (228 and 230). A plurality of holes (232) are defined within front face of tubes (222 and 224). Holes (232) allow liquid to be discharged in a direction that is substantially perpendicular to the plane of ring assembly (96). Notably, Bartos, II et al. do not describe nor suggest a washing system that includes a plurality of spray nozzles coupled to a ring manifold wherein the plurality of spray nozzles are circumferentially spaced about the gas turbine engine, wherein the plurality of spray nozzles are oriented to discharge at least one of a first fluid and a second fluid radially inward into the gas turbine engine from the ring manifold.

Claim 6 recites an apparatus for a gas turbine engine comprising “a plurality of spray nozzles coupled to a ring manifold, said plurality of spray nozzles are circumferentially spaced about the gas turbine engine and are oriented to discharge at least one of a first fluid and a second fluid radially inward into the gas turbine engine from the ring manifold, the first fluid contained within a first reservoir, the second fluid contained within one of the first reservoir and a second reservoir, said washing system configured to inject the first fluid and the second fluid into the gas turbine engine, wherein one of the first and second fluids comprises an anti-static liquid that facilitates reducing a rate of formation of particulate matter within the gas turbine engine.”

Bartos et al. do not describe nor suggest an apparatus for a gas turbine engine as is recited in Claim 6. Specifically, Bartos et al. do not describe nor suggest an apparatus for a gas turbine engine including a washing system that includes a plurality of spray nozzles coupled to a ring manifold wherein the plurality of spray nozzles are circumferentially spaced about the gas turbine engine, and wherein the plurality of spray nozzles are oriented to discharge at least one of a first fluid and a second fluid radially inward into the gas turbine engine from the ring manifold. Rather, Bartos et al. describe a ring assembly in flow communication with a gas turbine engine cleaning unit. The ring assembly includes two

separate arcuate tube sections wherein the front face of each tube section includes a plurality of holes defined therein. The plurality of holes allow liquid to be discharged from the ring assembly in a direction that is substantially perpendicular to the plane of the ring assembly into the gas turbine engine.

Accordingly, for at least the reasons set forth above, Claim 6 is submitted to be patentable over Bartos et al.

Claims 7 and 9-11 depend from independent Claim 6. When the recitations of Claims 7 and 9-11 are considered in combination with the recitations of Claim 6, Applicants submit that dependent Claims 7 and 9-11 likewise are patentable over Bartos et al.

Claim 12 recites a gas turbine engine washing system configured to reduce particulate matter within the gas turbine engine, and wherein the gas turbine engine includes a compressor. The washing system comprises “a plurality of spray nozzles coupled to a ring manifold, said plurality of spray nozzles are circumferentially spaced about the gas turbine engine and are oriented to discharge at least one of a first fluid and a second fluid radially inward into the gas turbine engine from the ring manifold, the first liquid contained within a first reservoir, the second fluid contained within one of the first reservoir and a second reservoir, the plurality of nozzles coupled in flow communication with at least one of said first and second reservoirs and for injecting the first and second fluids into the gas turbine engine upstream from said compressor, wherein one of the first and second fluids is an anti-static liquid that facilitates reducing electrostatic attraction within the gas turbine engine.”

Bartos et al. do not describe nor suggest a gas turbine engine washing system configured to reduce particulate matter within the gas turbine engine as is recited in Claim 12. Specifically, Bartos et al. do not describe nor suggest a washing system that includes a plurality of spray nozzles coupled to a ring manifold wherein the plurality of spray nozzles are circumferentially spaced about the gas turbine engine, and wherein the plurality of spray nozzles are oriented to discharge at least one of a first fluid and a second fluid radially inward into the gas turbine engine from the ring manifold. Rather, Bartos et al. describe a ring assembly in flow communication with a gas turbine engine cleaning unit. The ring assembly includes two separate arcuate tube sections wherein the front face of each tube section

includes a plurality of holes defined therein. The plurality of holes allow liquid to be discharged from the ring assembly in a direction that is substantially perpendicular to the plane of the ring assembly into the gas turbine engine.

Accordingly, for at least the reasons set forth above, Claim 12 is submitted to be patentable over Bartos et al.

Claims 14-16 depend from independent Claim 12. When the recitations of Claims 14-16 are considered in combination with the recitations of Claim 12, Applicants submit that dependent Claims 14-16 likewise are patentable over Bartos, et al.

For at least the reasons set forth above, Applicants respectfully request that the 35 U.S.C. 102(b) rejection of Claims 6, 9-12, and 14-16 be withdrawn.

In view of the foregoing amendments and remarks, all the claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited.

Respectfully submitted,



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